REMARKS

This is in full and timely response to the Office Action mailed on May 8, 2006. Reexamination in light of the following remarks is respectfully requested.

Claims 1-6 are currently pending in this application, with claim 1 being independent.

No new matter has been added.

Rejections under 35 U.S.C. §103

Paragraph 2 of the Office Action indicates that claims 1-2, 4-6 and 8 have been rejected under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 3,827,792 to Hollins and further in view of Japanese Application Publication No. 10-86609 to Iketani, U.S. Patent No. 5,837,072 to Fukunaga, and U.S. Patent No. 3,815,651 to Neal.

Paragraph 3 of the Office Action indicates that claim 3 has been rejected under 35 U.S.C. §103 as allegedly being unpatentable over Hollins, Iketani, Fukunaga, and Neal, and further in view of Japanese Application Publication No. 5-154941 to Nakayama.

At least for the following reasons, if the allowance of the claims is not forthcoming at the very least and a new ground of rejection made, then a ***new non-final Office Action*** is respectfully requested.

These rejections are traversed at least for the following reasons.

Claim 1 - While the statement of the rejection notes claim 8, the body of the rejection fails to set forth the reasons as to why claim 8 has been rejected. Accordingly, claim 8 is deemed to contain allowable subject matter. The features of claim 8 have been wholly incorporated into claim 1 to form amended claim 1. Thus, prior claim 8 is now amended claim 1.

Claim 1 is drawn to a compound solid tire, comprising

a core tire made of an annular elastic body and an annular cover tire having an inner peripheral surface to be fitted in a non-bonding state to an outer peripheral surface of the core tire, the cover tire forming a tread part and side parts, wherein:

the inner peripheral length of the cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position,

at least one longitudinal groove extending in the tire circumferential direction and a plurality of transversal grooves extending in the tire axial direction are provided on the outer peripheral surface of the core tire, on the other hand, a protrusion engaging with the longitudinal groove and transversal grooves is provided on the inner peripheral surface of the cover tire, and

the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Hollins - Hollins arguably teaches a resilient tire and wheel assembly. The airless tire 10 of Hollins arguably includes an outer tire 14 and an inner tire 16. Located about the side portions of annular section 16a on opposed sides of the inner tire are cavities 16c (Hollins at Figures 2-4, column 3, lines 50-52). Internal stubby projections 14a extend inwardly from outer tire 14 and are arranged in number and location so that each projection fills a separate cavity of inner tire 16 (Hollins at Figure 2, column 4, lines 26-29).

However, Hollins fails to disclose, teach or suggest that the inner peripheral length of the outer tire 14 at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the inner tire 16 at the outer peripheral surface center position.

Hollins arguably teaches that while a particular configuration for cavities 16c and their location has been shown in the drawings, it is to be understood that other configurations and locations can be used if desired (Hollins at column 3, lines 53-57). Hollins arguably teaches that while 12 cavities have been shown on each opposed side of inner tire 16, varying numbers of cavities can be used (Hollins at column 3, lines 57-60).

However, Hollins fails to disclose, teach or suggest that the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Iketani - Iketani arguably teaches the presence of tread replacing type tire. This tire has such structure as preventing a tread ring from deforming in such a way that the tread rings 2, which are fixed in a tire body 1 and outer peripheral surface of the tire body 1, are fixed due to the fitting of the projections 3 and recesses 4, which are fitted to each other (Iketani at Abstract).

The tread ring 2 can be detached from the tire body 1 by reducing the air pressure in the tire body 1 so that the outer diameter of the tire body 1 becomes smaller than the inner diameter of the tread ring 2 including the projections 4 in the inner surface of the tread ring 2 (Iketani at Abstract).

However, Iketani fails to disclose, teach or suggest that the inner peripheral length of a cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position.

Moreover, Iketani fails to disclose, teach or suggest that the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Fukunaga - Fukunaga arguably teaches a solid tire A having an annular rubber member 3 fitted on a rim 2 of a wheel 1, and a hollow rubber tire 4 fitted on the rubber member 3 (Fukunaga at Figures).

Fukunaga arguably teaches that if the solid tire is continuously subjected to a large load that causes the annular rubber member 3 to be deformed by 10-20% for a long time, the member 3 might suffer plastic (permanent) deformation (Fukunaga at column 4, lines 37-40).

However, Fukunaga fails to disclose, teach or suggest that the inner peripheral length of a cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position.

In addition, Fukunaga fails to disclose, teach or suggest that the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Neal - Neal arguably teaches a replacement tread method.

The Office Action contends that it is extremely well known and conventional in the tire industry to form an outer member with a smaller length in order to provide a tight fit between two components, such as shown for example by Neal (Office Action at page 3).

In response to this contention, in the case of compound solid tires, a large extent force is required in fitting a cover tire on a highly-rigid solid-core tire, and accordingly the relative dimensional arrangement is not commonplace.

Neal arguably teaches that the angle A is always less than the angle B in the replacement tire (Neal at column 3, lines 10-12). Neal arguably teaches that when the replacement tread 10 is positioned over the tire casing 12, it is stretched as shown in Fig. 3 (Neal at column 3, lines 12-13). Neal arguably teaches that, referring to Fig. 4, after stretching occurs and the endless replacement

tread 10 is placed on the tire casing 12, the points a_1-a_2 and b_1-b_2 coincide (Neal at column 3, lines 13-16). Neal arguably teaches that this places the replacement tire 10 in tension and the tension forces insure a very close fit with respect to the external periphery of the tire casing 12 (Neal at column 3, lines 16-19).

Nevertheless, in the case of pneumatic tires, only if the outer diameter of a casing member before it is inflated is set smaller than the inner diameter of a tread ring, fitting of the casing member and the tread ring can be carried out with ease.

In contrast to this, the core tire in a compound solid tire has nothing to do with an inner pressure and therefore with a diametric size change. Accordingly, it never is a matter obvious to a skilled person in the art to set the inner peripheral length of a cover tire at the inner peripheral surface center position to be 92 to 99.5 % of the outer peripheral length of the core tire at the outer peripheral surface center position.

Thus, Neal fails to disclose, teach or suggest that the inner peripheral length of a cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position.

Furthermore, Neal fails to disclose, teach or suggest that the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Nakayama - Nakayama arguably teaches the manufacture of recap tires and the recap tires thereof are so featured that the radius of a bed tire after buffing a tread rubber fabricated so that an internal pressure of 30% of the standard internal pressure is filled into a standard rim is made Ra, and the radius of curvature R of the width directional cross section on the surface of a side to be attached to the bed tire of a precure tread rubber layer is allowed, having a center at the same side as

at the crown radius Ra, to be 0.4 times or more and 1.3 times or less, or lower than a 1.0 time of the crown radius Ra (Nakayama at Abstract).

However, Nakayama fails to disclose, teach or suggest that the inner peripheral length of a cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position.

Additionally, Nakayama fails to disclose, teach or suggest that the transversal groove is inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional, by making the pattern point-symmetrical around an arbitrary axis included in the tire equatorial plane and extending in the tire radial direction.

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: August 7, 2006

Respectfully submitted,

By _____

David T. Nikaido
Registration No.: 22,663
Brian K. Dutton
Registration No.: 47,255
RADER, FISHMAN & GRAUER PLLC
Correspondence Customer Number: 23353
Attorneys for Applicant